



無懼痛楚 邁步前行

A step forward without fear

進行運動時，如過份用力、姿勢錯誤，速度太快或過量活動，有機會導致肌肉拉傷，嚴重可引致骨折，脫臼或摔倒，請遵從物理治療師的指示進行運動。

There is a risk of muscle sprain / fracture/ dislocation/ fall if movement is too vigorous or improper position. Please follow the instructions of physiotherapist.

如有任何疑問，請向負責治療師查詢。
Please consult your physiotherapist if there is any enquiry.

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醫院管理局
HOSPITAL
AUTHORITY

物膝良機 運動有法

Exercise for Your Knee



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簡介 Introduction

本小冊子旨在透過運動及護理教育，使膝痛患者能：
This pamphlet aims to empower you to develop the following abilities through exercise and education.

無懼痛楚
No fear of pain

懂得處理病癥
Symptoms management

朝目標進發
Functional goals achievement

生活更活躍
More active lifestyle

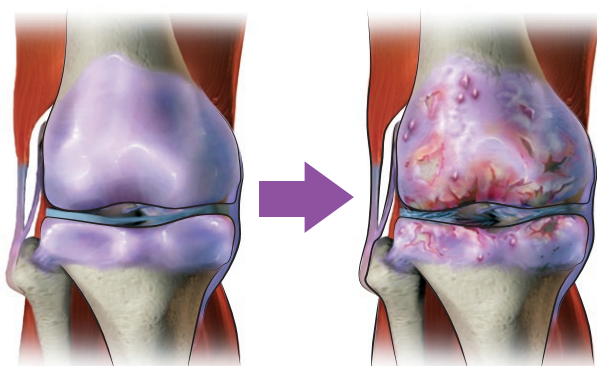
70歲以上的人士中，有三份一人受慢性關節痛影響。其中，膝關節跟大多數活動功能有關，例如走路、站立。雖然不能治癒，但我們知道保持活躍能有明顯正面效果！

One third of people aged above 70 suffer from chronic joint pain. In those, knee involves in many functional abilities, e.g. walking, standing. Although there is no complete cure, maintaining active lifestyle does help!



膝關節退化的轉變及成因

Changes and causes of knee joint degeneration



正常關節 Normal Knee

退化關節 Osteoarthritis

退化的膝關節：軟骨變薄和粗糙、關節時會腫脹；關節邊緣有骨質增生。

In the degenerative knee joint, the cartilage can become thinner and rougher; the joint may swell and osteophytes may also form around the joint edge.

1 自然退化 Natural degeneration

長年累月的活動和受力，使膝關節軟骨退化。加上年齡漸長，新陳代謝減慢，膝關節液流失，使痊癒能力減弱，產生了慢性發炎。

The knee joint cartilage degenerates over times, due to the accumulation of activities and loading. Besides, metabolism gets slower and joint lubricant reduces with aging. These all weaken the repair ability of the joint, resulting in chronic inflammation.

2 不正確姿勢及活動

Inappropriate posture and activities

長期蹲下，長期上落樓梯或斜路，長期過於劇烈之跳躍及跑步，都會加快膝關節的退化。

Prolonged squatting, stairs or slope walking, vigorous jumping and running may speed up knee joint degeneration.



3 關節負荷過重

Excessive loading on joints

體胖，經常搬運重物亦會加重膝蓋的負擔，加速退化。

Being overweight and frequently carrying heavy objects could overload knee joints and accelerate the degeneration.



4 創傷 Injury

創傷如撞傷和跌傷亦可能會加快關節退化。

Injuries like contusions and falls may accelerate joint degeneration.

退化性膝關節炎的症狀 Symptoms of knee osteoarthritis

- 1 疼痛 Pain
- 2 腫脹 Swelling
- 3 發熱 Increase in temperature
- 4 發紅 Redness
- 5 大腿無力 Thigh weakness
- 6 膝關節活動範圍受限
Restricted range of knee joint
- 7 膝關節活動時發出聲響
Crepitus of knee joint
- 8 膝關節略微增大或突出
Enlargement of knee joint
- 9 嚴重的會膝關節變形或攣縮
Deformity or contracture
may happen in severe
condition



運動篇章 Exercise chapter

關節轉變，有得醫嗎？ Is joint degeneration curable?

- 關節出現退化是無法治癒
Joint degeneration is not curable
- 在正常活動下，身體會嘗試修補關節的損壞
With normal activities, body will try to repair the joint damage
- 減少活動，肌肉將會發軟，關節變僵硬
With reduced activities, muscles will be weak while joints will be stiff
- 關節退化過程會轉壞
Joint degeneration would worsen over time

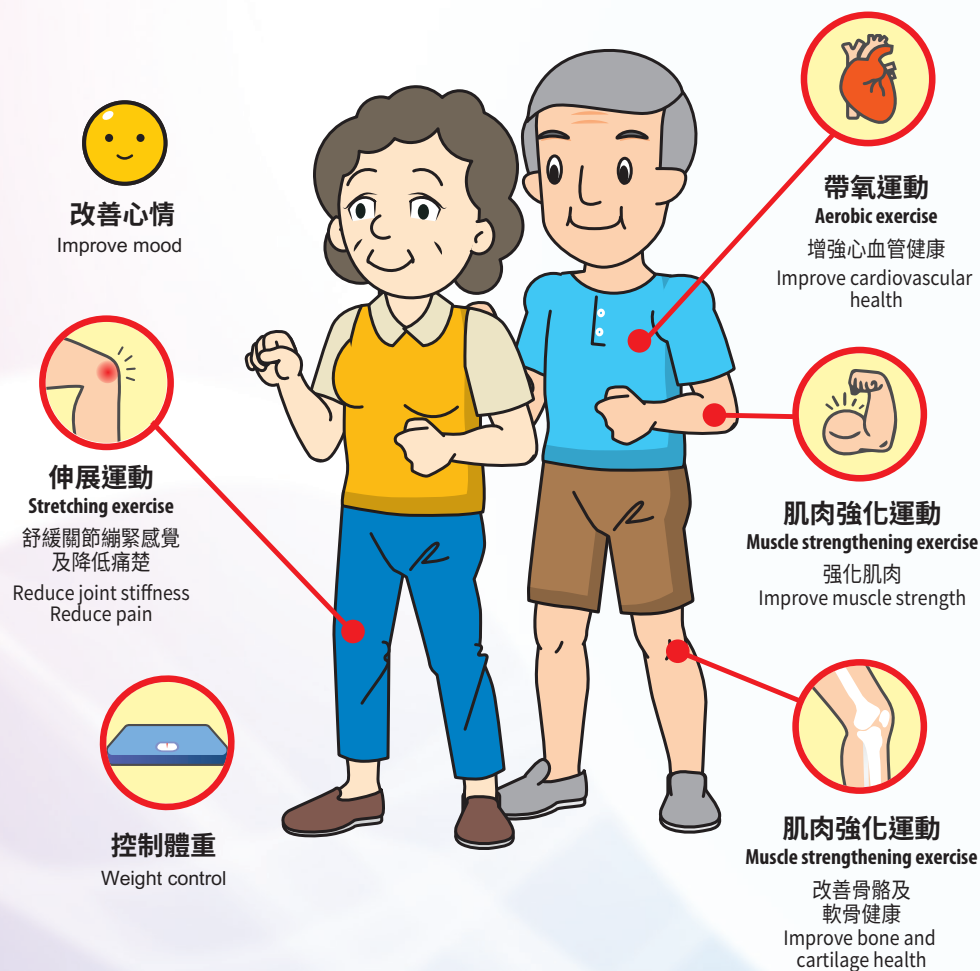
**如果你想幫助關節，一定要保持活躍！
If you want to help the joint, you must stay active!**

運動頻率 Exercise dosage

- 關節活動運動及伸展運動可每天進行
Joint mobilisation and stretching exercises can be done every day.
- 肌肉強化運動每週可進行兩至三次
Strengthening exercise can be done 2 to 3 times per week.
- 帶氧運動每星期應進行三至五日
Aerobic exercises can be done 3 to 5 days per week.

運動的好處 Benefits of exercise

- ✓ 改善肢體功能 Improve functional ability
- ✓ 改善生活質素 Improve the quality of life
- ✓ 減少服用止痛藥 Reduce intake of medicine for pain relief
- ✓ 減低手術需要 Reduce the need for surgery



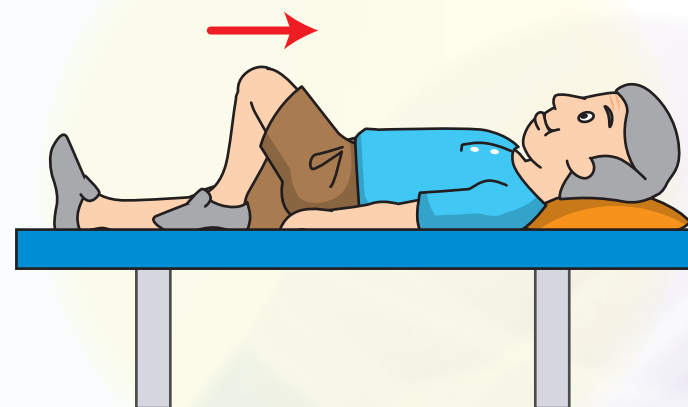
運動建議 Exercise suggestion

關節活動運動 Joint Mobilization Exercise 1

仰卧屈膝 Heel slide in supine lying

仰卧，屈曲腿部，維持5秒，然後伸直。換腳並每邊重複動作10次。

Lying on the back, slide your foot towards your buttock. Hold for 5 seconds. Relax and straighten your leg. Switch leg and repeat 10 times for each side.



關節活動運動 Joint Mobilization Exercise 2

坐式伸腿 Knee extension in sitting

坐著，慢慢把膝部伸直，再慢慢放下。換腳並每邊重複動作10次。

In sitting, slowly straighten your knee until it is fully extended. Then return slowly to the starting position. Switch leg and repeat 10 times for each side.

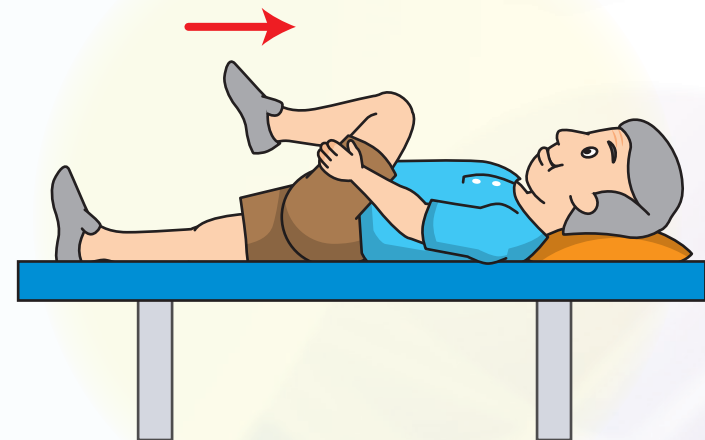


伸展運動 Stretching Exercise 1

仰臥抱膝 Knee to chest in supine lying

仰臥，屈曲腿部，雙手抱緊一邊大腿，維持5秒，然後放下。換腳並每邊重複動作10次。

Lying on the back, bend and hold onto your thigh, bring your knee towards your chest and hold for 5 seconds. Then bring your knee down. Switch leg and repeat 10 times for each side.

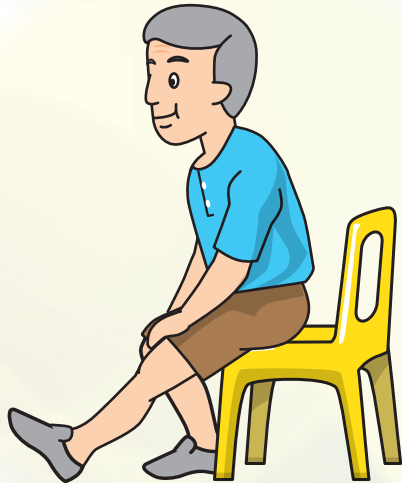


伸展運動 Stretching Exercise 2

坐式膕繩肌伸展 Hamstring stretching in sitting

坐著，伸直其中一隻腳，保持腰挺直，然後慢慢向前傾，直至感到大腿後方肌肉拉緊，維持15秒。換腳並每邊重複動作10次。

In sitting, straighten one leg and keep your back straight, then slowly lean forward until there is stretching feeling over the back of your thigh. Hold for 15 seconds. Switch leg and repeat 10 times for each side.

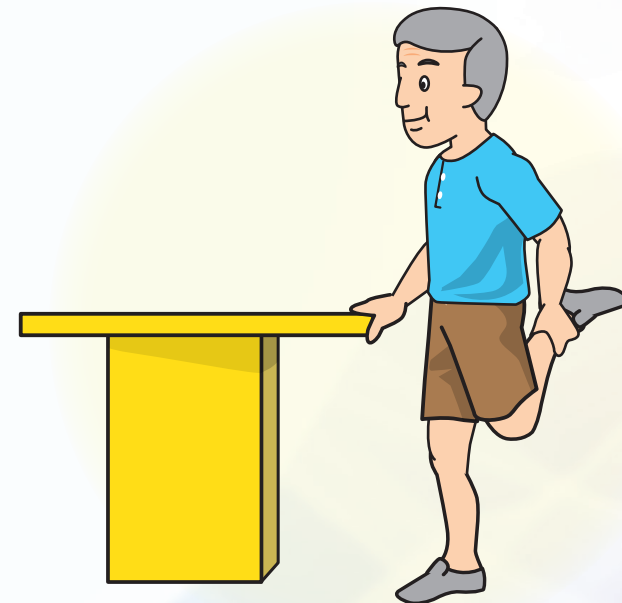


伸展運動 Stretching Exercise 3

站式股四頭肌伸展 Quadriceps stretching in standing

站立並扶穩，將其中一隻腳屈曲，用手捉住腳踝向上拉腳並向後提起，保持腰挺直，直至感到大腿前方肌肉拉緊，維持15秒。換腳並每邊重複動作10次。

In standing and holding onto a stable surface, bend one leg and hold onto the ankle. Keep your back straight and gently bring your heel closer to the buttock until there is stretching feeling over the anterior thigh. Hold for 15 seconds. Switch leg and repeat 10 times for each side.



伸展運動

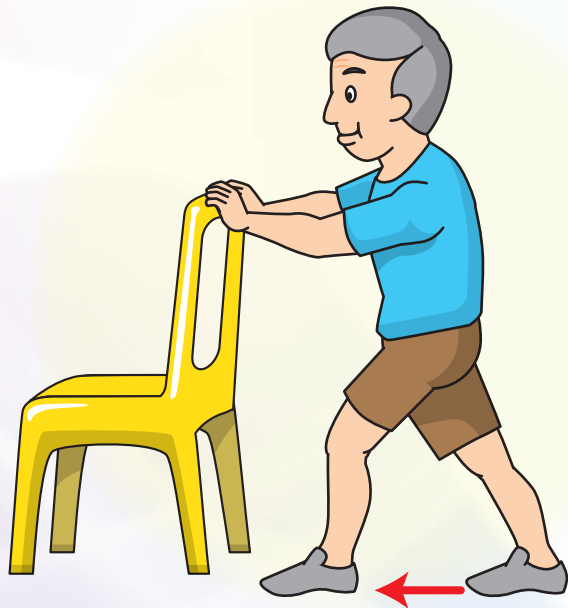
Stretching Exercise

4

站式腓腸肌伸展 Calf stretching in standing

弓步站立並扶穩，前膝微曲，直至感到後腳小腿肌肉拉緊，維持15秒。換腳並每邊重複動作10次。

In Bow stance and holding onto a stable surface, slightly bend the knee in front until there is stretching feeling over the calf of the leg behind. Hold for 15 seconds. Switch leg and repeat 10 times for each side.



肌肉強化運動

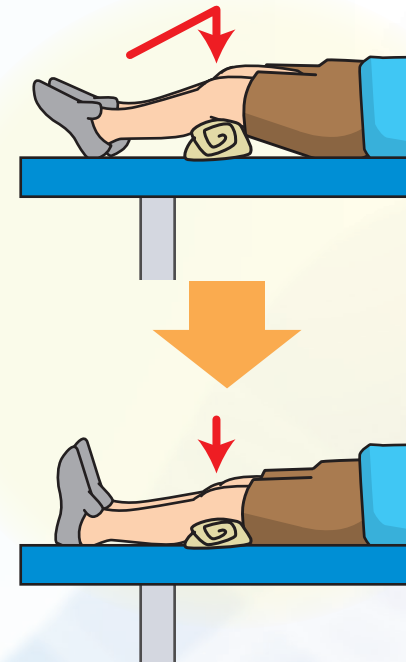
Strengthening Exercise

1

股四頭肌 Quadriceps

平躺，於膝部下放6至7寸高的毛巾，將膝窩壓近床面，停10秒後放鬆，重覆10次。換邊重複動作。每邊各做__組。

Lying on your back, place a 6-to-7-inch high towel roll under your knee, and press your knee towards the bed. Hold for 10 seconds, then relax. Repeat 10 times. Switch leg and repeat the exercise. Do it for __sets for each side.



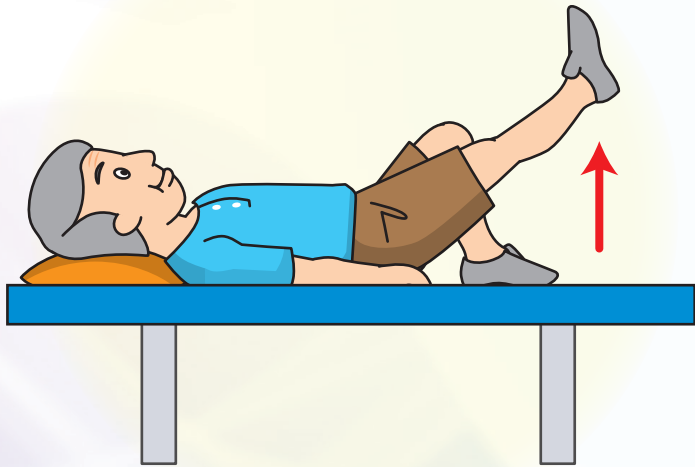
肌肉強化運動 2

Strengthening Exercise

仰卧提腿 Straight leg raise in supine lying

仰卧，膝部伸直並提起腿部，維持5秒後將腿放下，重覆10次。換邊重複動作。每邊各做__組。

Lying on your back, bring your leg up whilst keeping it straight. Hold for 5 seconds, then bring your leg down. Repeat 10 times. Switch leg and repeat the exercise. Do it for __sets for each side.



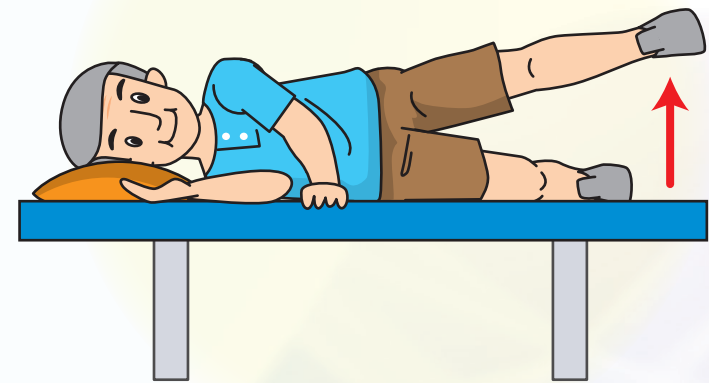
肌肉強化運動 3

Strengthening Exercise

側卧提腿 Straight leg raise in side lying

側卧，膝部伸直並提起腿部，維持5秒後將腿放下，重覆10次。換邊重複動作。每邊各做__組。

Lying on one side, bring your leg up whilst keeping it straight. Hold for 5 seconds, then bring your leg down. Repeat 10 times. Switch leg and repeat the exercise. Do it for __sets for each side.



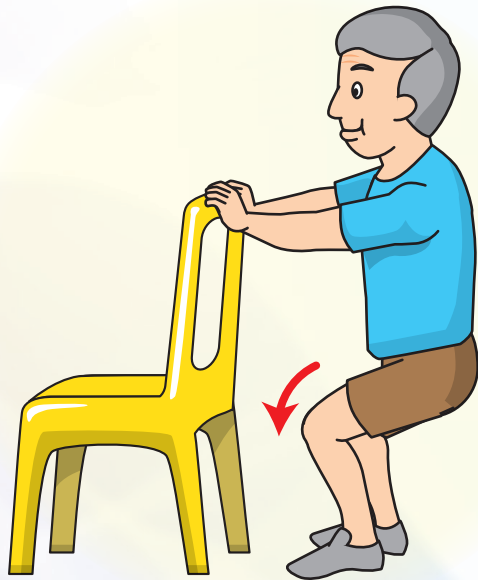
肌肉強化運動 Strengthening Exercise

4

微蹲 Mini-squat

站立，扶著椅子，慢慢曲膝往下微蹲，維持5秒，然後緩緩站起。重覆10次，做___組。

In standing and holding onto a stable chair, slightly bend your knees to squat down slowly. Hold it for 5 seconds, then stand up slowly. Repeat 10 times. Do it for ___ sets.



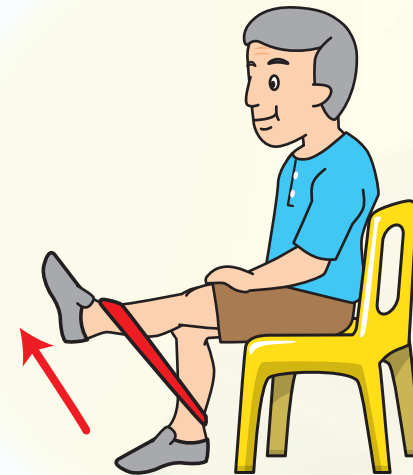
橡筋帶肌肉強化運動 Strengthening Exercise with Elastic Band

1

股四頭肌 Quadriceps

坐著，將橡筋帶綁在雙腳腳踝位置，然後將腳舉起伸直，維持5秒後將腳放下，左右交替。重覆10次，做___組。

In sitting, tie the elastic band around ankle level, straighten one leg. Hold for 5 seconds, then bring your leg down. Do it alternately. Repeat 10 times. Do it for ___ sets.



橡筋帶肌肉強化運動

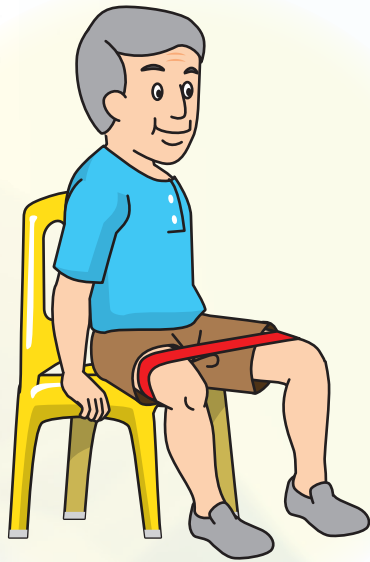
Strengthening Exercise with Elastic Band

2

髖關節外展肌肉 (坐著) Hip abductor (sitting)

坐著，雙腳併攏，將橡筋帶綁在雙膝上方位置，收腹，然後將大腿打開，維持5秒後將腿併攏。重覆10次，做___組。

In sitting with your feet placing together, tie the elastic band just above both knees, spread your thighs apart while tucking your tummy in. Hold for 5 seconds, then return slowly to the starting position. Repeat 10 times. Do it for ___ sets.



橡筋帶肌肉強化運動

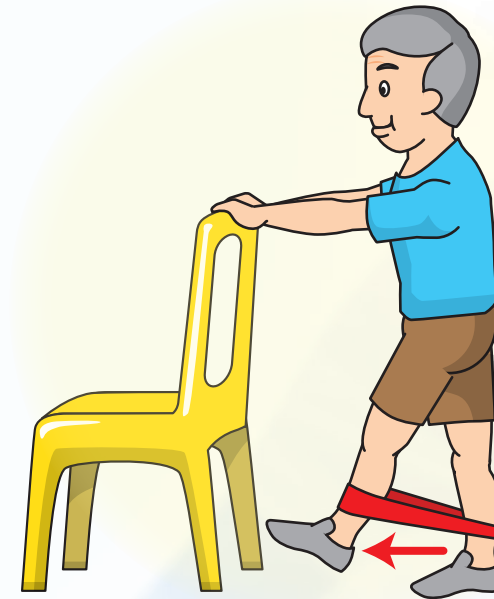
Strengthening Exercise with Elastic Band

3

向前踢腳 Forward kicking

站立並扶穩，將橡筋帶綁在雙腳腳踝位置，然後慢慢把腳向前踢起，維持5秒後將腳放下，左右交替。重覆10次，做___組。

In standing and holding onto a stable surface, tie the elastic band around ankle level, slowly raise up one leg forward. Hold for 5 seconds, then bring your leg down. Do it alternately. Repeat 10 times. Do it for ___ sets.



橡筋帶肌肉強化運動

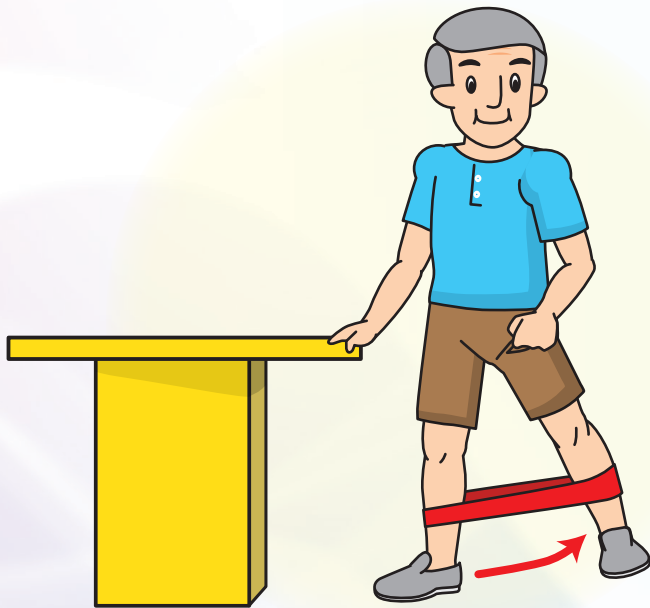
Strengthening Exercise with Elastic Band

4

髖關節外展肌肉 (站立) Hip abductor (standing)

站立並扶穩，將橡筋帶綁在雙腳腳踝位置，然後慢慢將腳向外打開，維持5秒後將腿放下，重覆10次。換邊重複動作。每邊各做___組。

In standing and holding onto a stable surface, tie the elastic band around ankle level, slowly open up the leg. Hold for 5 seconds, then bring your leg down. Repeat 10 times. Switch leg and repeat the exercise. Do it for ___ sets for each side.



橡筋帶肌肉強化運動

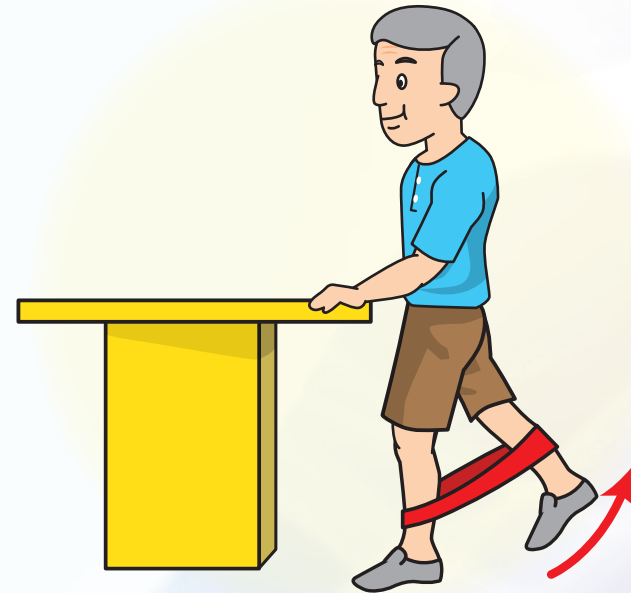
Strengthening Exercise with Elastic Band

5

臀部伸肌 Hip extensor

站立並扶穩，將橡筋帶綁在雙腳腳踝位置，然後慢慢將腳向後踢，維持5秒後將腳放下，左右交替。重覆10次，做___組。

In standing and holding onto a stable surface, tie the elastic band around ankle level, pull the leg back. Hold for 5 seconds, then bring your leg down. Do it alternately. Repeat 10 times. Do it for ___ sets.



帶氧運動 Aerobic exercise

帶氧運動 Aerobic Exercise

多長時間?
How long?

- 每天30分鐘或以上
30 minutes or more per day
- 每次最少10分鐘
10 minutes or more per session

急步行 Jogging

多頻密?
How
frequent?

- 一星期3-5天
3-5 days per week

踏步 Marching

要多費力?
How hard?

- 身感微溫
Increase in body temperature
- 心跳稍加快
Increase in heart rate
- 仍能保持談話
Still able to talk

踏單車 Cycling

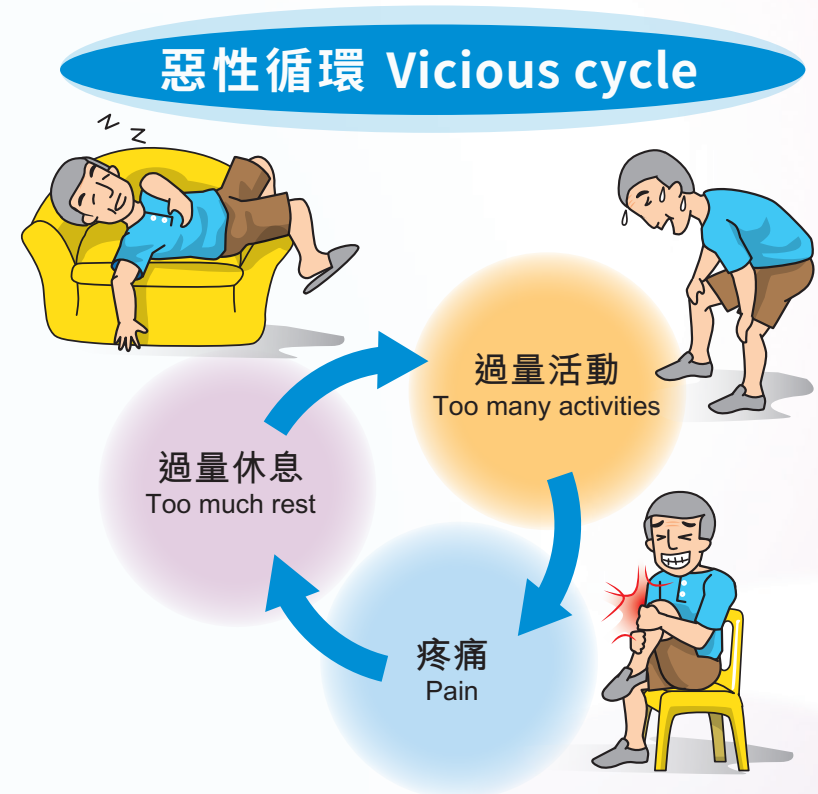
游泳 Swimming

你的提議? Any suggestion?

做些甚麼?
What to do?

- 按你喜好
As you like
- 融入每天生活中
Be parts of your daily activities

逐漸遞增活動及運動計劃的調整 Paced exercise & adjustment of exercise program



**你需要打破惡性循環!
You need to break the vicious cycle!**

- ✓ 保持活躍 Stay active
- ✓ 繼續做你享受的事 Continue what you enjoy
- ✓ 分散注意 Distract from pain
- ✓ 設立目標，持之以恆 Keep working hard for your goal

如何開始逐漸遞增？ How to progress step by step?

- 將工作/活動分拆成數份，逐漸遞增
Break exercise into parts by parts and progress slowly
- 打斷過勞 - 過少活動循環
Break the vicious cycle
- 留意運動期間的痛楚變化
Aware the change of pain pattern during exercises
- 增進活力，使你能掌控自己的生活
Be energetic to regain the self control of functional activities

無懼痛楚 Don't be afraid of the pain

膝關節炎發作時痛楚會加劇，但這是會慢慢減退的。該痛楚強度不一定能真實反映你膝關節退化的嚴重程度或關節受傷的情況。你亦可服用由醫生處方的止痛藥物來舒緩痛楚。

Pain exacerbation is a common symptom in knee osteoarthritis, but it will be decreased gradually. The pain intensity may not truly reflect the severity of your knee degeneration or injury. You may also take the pain killers prescribed by your doctor for pain relief.

另外，運動後出現肌肉痠痛是常見現象，尤其是開始新的運動計劃時。肌肉痠痛可持續1-2天。當你的身體適應該運動後，這種痠痛會減少。

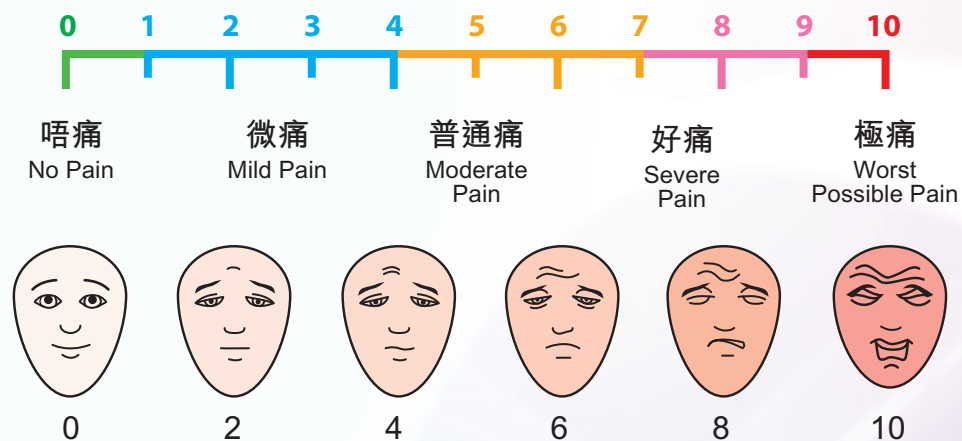
Also, it is common to have muscle soreness after doing exercises, especially when the exercise program is new. Muscle soreness can last for 1-2 days. The soreness will be reduced once your body gets used to the exercises.

何時需要調整鍛鍊計劃？ When do you need to adjust your exercise program?

- 運動後所增加的痛楚維持多於1-2天。
Any pain increases that lasts for more than 1-2 days.
- 痛楚的嚴重程度大於你可接受的程度。
The pain severity is more than you can tolerate.

你可以用下面的圖表來量度你在運動期間或之後的痛楚程度。

You can use the below pain scale to assess your pain level during or after exercise.



當膝關節炎發作或者痛楚增加時， 如何調整鍛鍊計劃？

How to adjust your exercise program when experiencing knee osteoarthritis exacerbation or when the pain increases?

- 減少運動重複次數
Reduce the repetition of exercises.
- 增加運動中途休息時間
Increase rest in between exercises.
- 減低運動強度
Reduce the intensity of exercises.
 - 減少每個動作停留的時間。
Reduce the duration you hold for each exercise.
 - 減低強化運動的負荷量。
Reduce the load of exercise.
- 先選擇做一些舒緩痛楚的溫和運動，例如膝蓋關節活動運動。
Start by doing some gentle exercises for pain relief, such as knee mobilisation.



我的運動日誌

My exercise diary

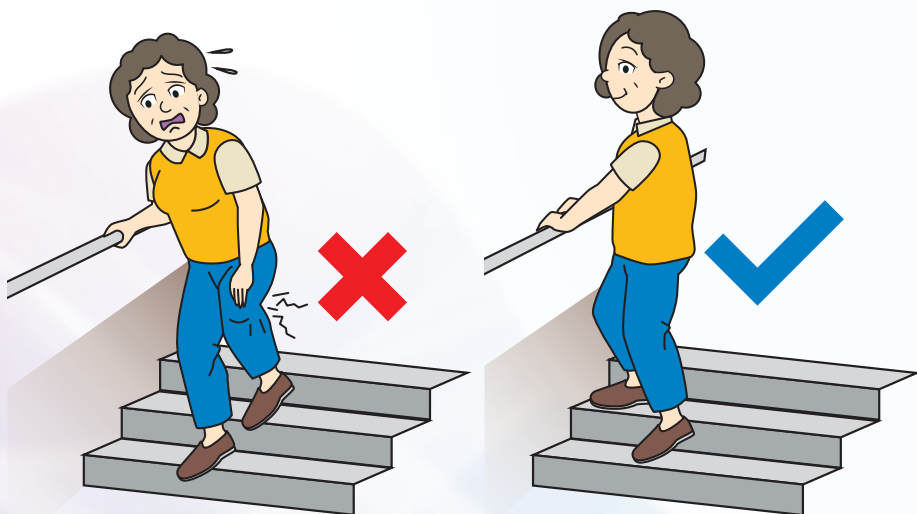
請在下方記錄你一個月的運動種類及時間
Please mark down the details of your exercise for a month

				年Year		月Month
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

膝關節的護理技巧 Knee care technique

1 減少關節負荷 Reduce joint loading

- 減輕體重
Reduce your weight.
- 避免攜帶或搬運重物，如需要可用手推車輔助。
Avoid carrying heavy objects. Use trolley if necessary.
- 如需長時間步行或站立，可使用手杖分擔關節負荷。
Use walking stick if prolonged walking/ standing is needed.
- 盡量避免上落樓梯。如不能避免，可側身扶欄杆上落。
Avoid stair climbing if possible. If it is unavoidable, make use of handrail and climb downstairs in sideway approach..



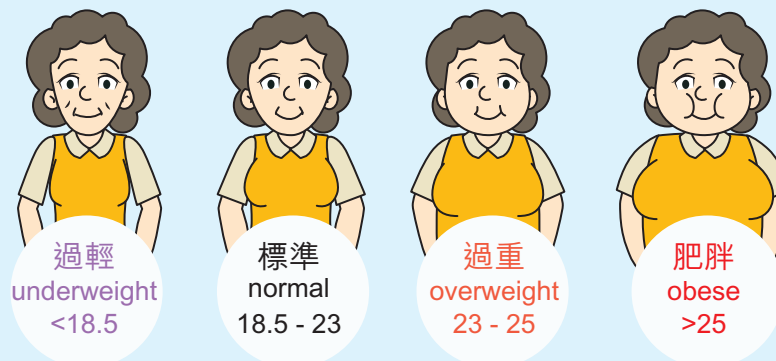
體重管理 Weight management

- 適量減輕體重，以減輕關節負擔。
Reduce weight adequately to reduce joint loading
- 增加活動 + 控制飲食
Adequate exercise + Diet control



你的體重合乎理想嗎？
Is your body weight within normal range?

體重指標 (BMI) = $\frac{\text{體重 (公斤)}}{\text{身高 (米)}^2}$ = $\frac{\text{Weight (Kg)}}{\text{Height (m)}^2}$



我的飲食日誌 My food diary

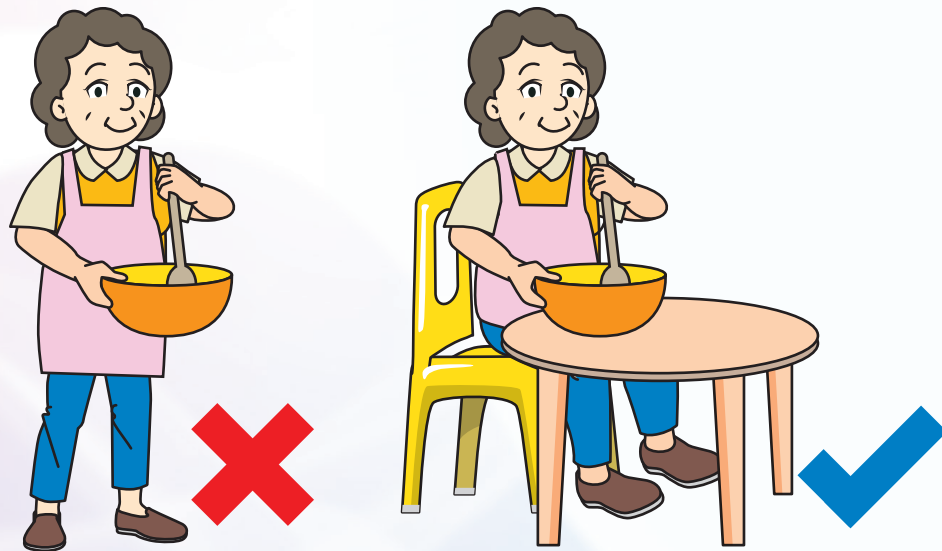
試試了解自己吃喝多少，並記錄兩天
Try to understand how much you eat and record it for 2 days

	進食食物 Food	飲品 Drink
第一天 Day 1		
第二天 Day 2		

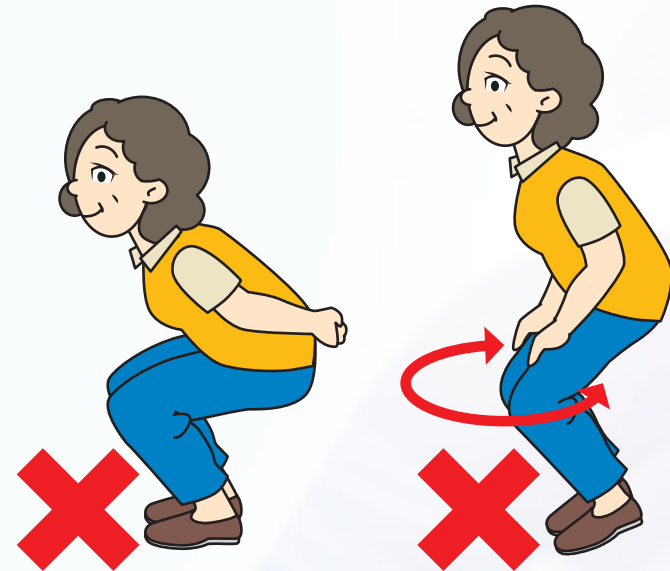
2 保持正確姿勢及使用正確鞋類

Maintain good posture and use proper footwear

- 座位高度要適中。
Sit with appropriate seat height.
- 避免長時間蹲下或跪在地上工作，例如洗地。應使用適當工具輔助。
Avoid prolonged squatting and kneeling e.g. mopping floor. Use tools to help.
- 避免長時間站立工作，盡量坐下工作，並定時轉換姿勢。
Avoid prolonged standing during work. Sit down and change posture regularly if possible.

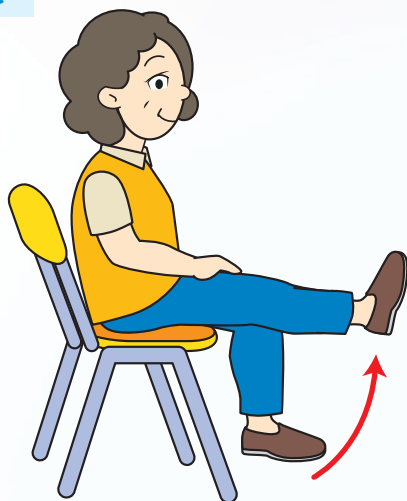


- 穿著有軟膠底的鞋類。鞋底高度約為一吋。避免穿高跟鞋。
Wear shoes with soft heels with about 1 inch height. Avoid high heel shoes.
- 鞋底若出現局部磨損以致傾斜，請儘快更換。
Consider to change your shoes if wedging or wear-and-tear appears over the heels.
- 避免深蹲運動和在半蹲姿勢作膝部旋轉。
Avoid deep squats and movement with knee bending and rotation.



3 保持活動 Keep active

- 長時間坐後可作膝部伸展運動。
Carry out knee mobilization exercises after prolonged sitting.
- 站起來時可用雙手輔助。
Get up with support if needed.

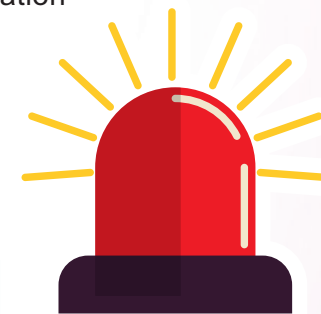


- 定期進行肌肉強化及伸展運動。
Perform strengthening and stretching exercises regularly.

膝關節炎復發期間的護理 Management for knee pain exacerbation

甚麼是發作？ What is flare up?

- 只是組織受刺激 Maybe tissue irritation
- 警告訊號 Warning signals
- 屬正常 Normal
- 並不顯示關節惡化
Doesn't mean joint worsening
- 是暫時性的 Temporary

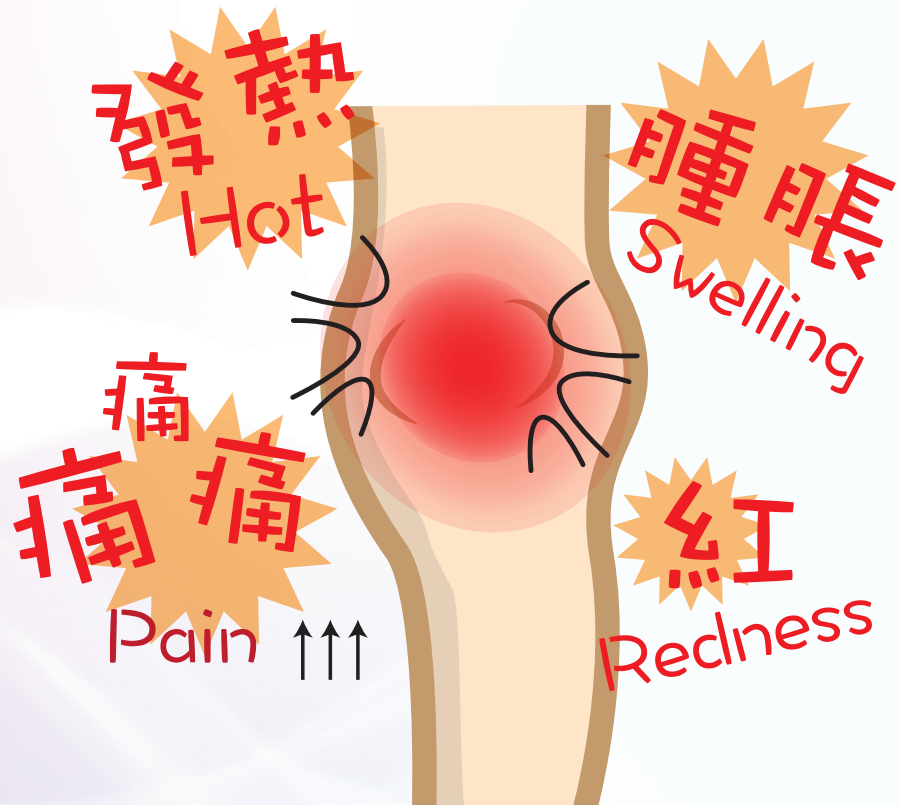


如何處理？ How to manage?

- 先休息 Take a rest
- 嘗試冰療 Try ice therapy
- 看病情用藥 Take drugs accordingly
- 按症狀調節運動強度
Adjust the exercise according to the symptoms
- 鬆弛自己 Relax yourself
- 慢慢回復正常活動
Gradually restore normal activities

如何分辨急性及慢性膝關節炎?
How to differentiate acute or chronic inflammation of knee joint?

急性膝關節炎
Acute inflammation



慢性膝關節炎
Chronic inflammation



如何分別處理急性和慢性膝關節炎？ How to manage acute and chronic inflammation of knee joint?

	急性膝關節炎 Acute inflammation	慢性膝關節炎 Chronic inflammation
紅 Redness	✓	✗
熱 Increased in temperature	✓	✗
腫 Swelling	✓	✓
痛 Pain	✓	✓
處理方法 Treatment	- 冰療 Ice therapy - 適當休息 Proper Rest - 關節活動 Joint mobilization	- 熱療 Heat therapy - 運動鍛鍊 Mobilization and strengthening

冰療 Ice therapy

可使用冰袋或急凍青豆於膝關節敷十分鐘
Use ice pad or iced peas Apply for 10 minutes on knee



熱療 Heat therapy

可使用暖毛巾或暖水袋並用毛巾包裹
溫度少於45度
避開關節凸出的位置
於膝關節暖敷15分鐘
Use warm towel or warm pad Use towel to wrap the pad
Temperature less than 45 °C
Avoid application to bony prominence
Apply for 15 minutes on knee



冷熱治療的注意事項及禁忌症 Precautions & Contraindications of Ice and Heat Therapy

留意! Caution!

- 熱療不可高於攝氏45度
Heat therapy cannot be higher than 45°C
- 冰和熱療都能使你燒傷
Both ice and heat therapy can cause skin burn if overtime
- 經常檢查皮膚 Regular skin checking
- 冷或熱療不能和藥膏同時使用
Cannot apply heat and cold therapy with ointment

若有以下的禁忌症，則不能使用冷熱治療
Hot or ice therapy would not be suggested with the contraindications listed as below

熱療 Heat therapy

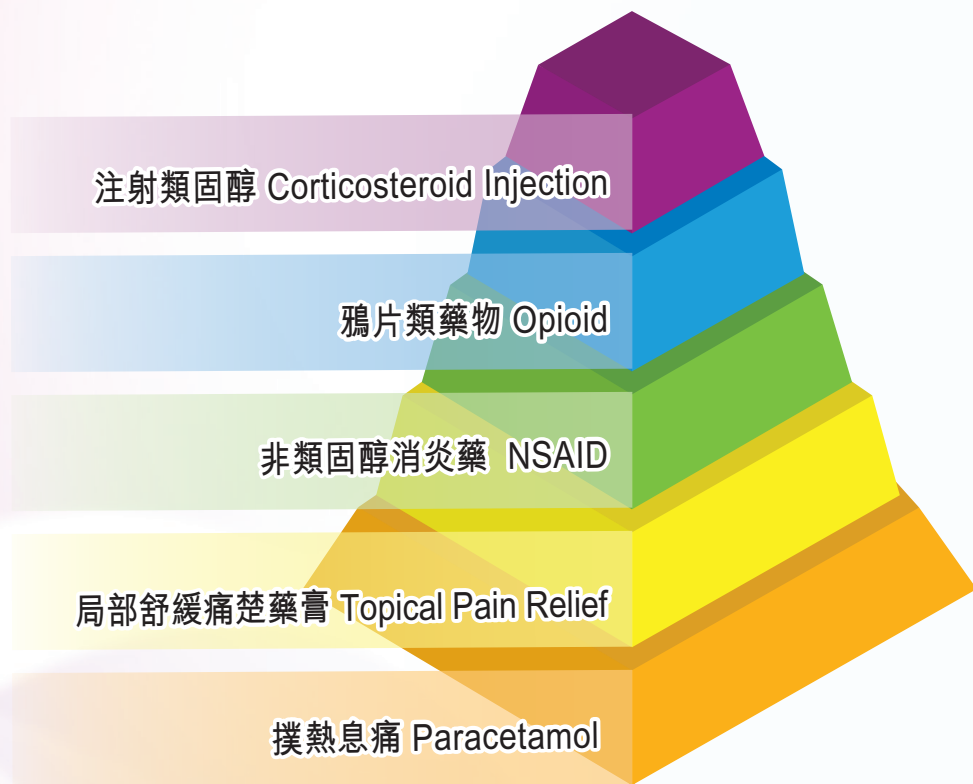
- ✗ 傷口 Open wound
- ✗ 急性發炎
Acute inflammation
- ✗ 喪失溫度感覺
Loss of sensation
- ✗ 血液循環不良
Poor circulation

禁忌症 Contraindications

冰療 Ice therapy

- ✗ 傷口 Open wound
- ✗ 對冰有敏感
Allergic to ice
- ✗ 喪失溫度感覺
Loss of sensation
- ✗ 血液循環不良
Poor circulation

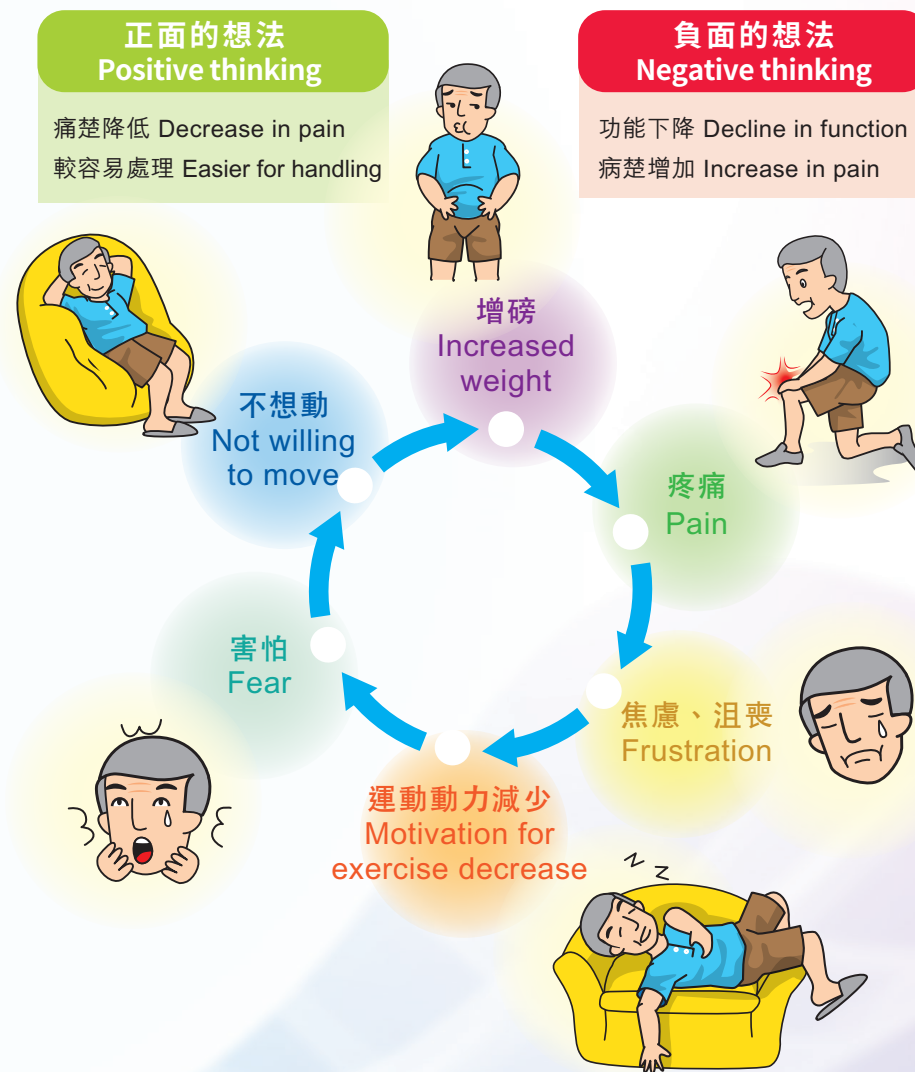
藥物治療 Pharmaceutical Treatment



你並不需要強忍痛楚，請按醫生處方服用藥物。
 You do not need to tolerate the pain without the medications.
 Please follow doctor's prescription.

情緒與疼痛 Emotion & Pain

焦慮和情緒都與疼痛有關嗎？
 Is anxiety and emotion related to pain?



鬆弛練習 Relaxation exercise

鬆弛練習亦可減輕痛楚!

Relaxation exercise could also reduce pain!

1

找個舒適環境坐下，
閉上雙眼。
Sit down comfortably
and close your eyes.

如何鬆弛? How to relax?



2

用鼻深深吸一口氣，吸氣時小
腹慢慢漲起，再緩緩呼出，呼
氣時感到小腹慢慢收縮。
Breathe in through your nose
slowly to inflate your tummy.
Breath out slowly and your
tummy should deflate.

4

重複以上練習數次，
盡量放鬆。
Repeat a couple of
times and try to stay
relaxed.

3

將注意力如掃描般由頭至腳
趾慢慢移動，放鬆繃緊的肌
肉。Deliberately focus on
your muscles starting from
head to toes, relax those
muscles that are tight.

總結 Conclusion

了解膝痛的真相，學習運動及自我護理

Understanding knee pain, empowering yourself with
exercise and self-management

緊記 Remember

- 無懼痛楚
Show no fear of pain
- 懂得處理病癥
Manage your symptoms
- 生活更活躍
Maintain active lifestyle
- 朝目標進發
Achieve your goals



歡迎下載醫院管理局流動應用程式
「HA Go」，使你的物理治療師可
發放更多有關膝關節的資訊給你。
You are very welcome to download
Hospital Authority's one stop app "HA Go"
to get more knee rehabilitation
information from your physiotherapist.



詳情可參閱此網頁，
或向你的物理治療師查詢。
You can visit this website or ask your
physiotherapist for further information.